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EXAMINER	
WEST, JEFFREY R	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/728,095	KVISGAARD ET AL.	
	Examiner	Art Unit	
	Jeffrey R. West	2857	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 March 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-16 and 18-41* is/are pending in the application.

4a) Of the above claim(s) *1-10* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *11-16 and 18-41* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *06 September 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☒ Certified copies of the priority documents have been received in Application No. 08/809,492.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claim Objections

2. Claims 12, 20, 21, 37, and 41 are objected to because of the following informalities:

In claim 12, line "is is determined" should be ---is determined---.

In claim 20, line 2, to avoid problems of antecedent basis, "the probability" should be ---a probability---.

In claim 21, line 2, to avoid problems of antecedent basis, "the probability" should be ---a probability---.

In claim 37, line 3, to avoid problems of antecedent basis, "allocation effecting" should be ---allocation controlling---.

In claim 41, line 9, to avoid problems of antecedent basis, "the probabilities" should be ---probabilities---.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 12-15, 19-24, 33, and 35-39 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 12 is considered to be vague and indefinite because it recites, "allocation of a respective one of the articles to said batch" and "the incomplete batch". Claim 12, and parent claim 11, refer to "plural batches" and "a plurality of incomplete batches". These references do not particularly point out a specific batch, but rather provide a plurality of different batches and therefore it is unclear to one having ordinary skill in the art as to what specific batch of the plurality of batches "said batch" and "the incomplete batch" refer.

Claim 12 is rejected under 35 U.S.C. 112, second paragraph, because it attempts to further limit parent claim 11 by further limiting "said preference used for controlling allocation of an article to a respective batch" by specifying its "dependence upon a comparison of the factor calculated for each incomplete batch" while the step of controlling allocation in claim 11 is for controlling allocation of "the articles" and not "an article."

Claim 33 is rejected under 35 U.S.C. 112, second paragraph, because it attempts to further limit "the allocation of plural articles of the same type" while parent claim 29 describes allocation of "different kinds of articles". Therefore, it is unclear to one having ordinary skill in the art as to what allocation claim 33 is attempting to refer.

Claim 38 is considered to be vague and indefinite because it recites, "means for allocating the articles to make up the batches in accordance with the calculated preference". Claim 38, however, already defines "a computer...to control allocation of the articles to make up the batches in accordance with said historical frequency distribution of article weights". Therefore, it is unclear to one having ordinary skill in the art as to whether the "means for allocating the articles to make up the batches in accordance with the calculated preference" is distinct from or the same as the "computer...to control allocation of the articles to make up the batches in accordance with said historical frequency distribution of article weights" or if the allocation is performed twice.

Claims 13-15, 19-24, 35-37, and 39 are rejected under 35 U.S.C. 112, second paragraph, because they incorporate the lack of clarity present in their respective parent claims

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 11-16, 18-28, and 34-41, as may best be understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Hays in view of GB Patent Application Publication No. 2 116 732 to Dalgaard.

With respect to claim 11, Hays discloses a method of accumulating articles having different weights (column 3, lines 7-9) into plural batches (column 3, lines 22-25) wherein each of a plurality of batches comprises a plurality of articles and has a sum weight within a predetermined weight range (column 4, lines 41-51), said method comprising the steps of establishing a historical frequency distribution of article weights (column 3, lines 38-44), and using a computer to keep track of the articles according to the weight of each article (column 2, line 62 to column 3, line 6) and to calculate a preference for use of each article in producing said batches (column 3, line 64 to column 4, line 2 and column 5, lines 1-13) by statistical probability calculations based upon said historical frequency distribution (column 3, lines 38-44, column 4, lines 8-15 and column 6, lines 18-36) and controlling allocation of the articles in the distribution system to make up the batches in accordance with the calculated preference (column 5, lines 1-13).

With respect to claim 12, Hays discloses that said statistical probability calculations comprise calculating a probability factor for each of a plurality of incomplete batches which is related to a completion probability that, by allocation of a respective one of the articles to said batch, the batch can be completed by

allocation of a succeeding one of the articles to said batch (column 4, lines 8-15 and column 6, lines 18-36), said probability factor being based upon said historical frequency distribution (column 3, lines 37-44 and column 6, lines 18-22), upon a sum weight of articles in the incomplete batch (column 6, lines 8-11) and upon a weight of the article to be allocated (column 6, lines 16-18); and wherein said preferences used for controlling allocation of an article to a respective batch is determined in dependence upon a comparison of the factor calculated for each incomplete batch (column 4, lines 8-15 and column 6, lines 18-36).

With respect to claim 13, Hays discloses that said calculating step comprises the further steps of deriving a completion probability from the predetermined weight range and from a current sum weight of articles in the respective incomplete batch (column 5, line 67 to column 6, line 18) and determining how said completion probability would change if a particular one of the articles to be allocated were to be allocated to that batch (column 5, lines 14-64 and column 6, lines 18-36).

With respect to claim 14, Hays discloses that said calculating step comprises the further steps of deriving a difference between the predetermined weight range for the completed batch and a current sum weight of the respective batch (column 6, lines 8-22), deriving from said historical frequency distribution, various combinations of article weights which would sum to said difference (column 6, lines 16-36), and deriving a completion probability for each of the various combinations from the historical frequency distribution (column 5, lines 14-64 and column 6, lines 18-36).

With respect to claim 15, Hays discloses that said calculating step comprises the further steps of establishing in a computer database functions, inherently as the computer requires such a memory/database of functions to perform the disclosed processing (column 5, lines 4-11 and column 7, lines 27-28), indicating completion probabilities of completing an incomplete batch by a succeeding one of the articles which has not yet been allocated (column 5, lines 14-64 and column 6, lines 18-36) and which has a weight in accordance with the historical frequency distribution (column 6, lines 16-36), and inherently accessing said computer database, when an allocation decision is to be made, to derive probability values relating to weight required for completing an incomplete batch if a particular one of the articles that is to be allocated were allocated to that batch (column 3, lines 37-44, column 4, lines 8-15 and column 6, lines 18-36).

With respect to claim 16, Hays discloses that said step of establishing a historical frequency distribution is performed in a manner taking into account variations in weight distribution of the articles to be batched (column 3, lines 38-44).

With respect to claim 18, Hays discloses that said allocation of the articles is performed in additional dependence upon the number of articles to be allocated to the respective batches (column 4, lines 60-64 and column 11, lines 1-8).

With respect to claim 19, Hays discloses that said allocation of the one of the articles is performed in additional dependence upon an existence of any partly completed batch which repeatedly fails to have an article allocated thereto (i.e. an available article cannot be found to complete the batch) (column 6, lines 22-36).

With respect to claim 20, Hays discloses that the probability factor calculation step comprises the step of modifying the calculation to increase the probability calculated for any partly completed batch which repeatedly fails to have an article allocated thereto (i.e. modifying the probability calculation by expanding the search to a slightly greater weight) (column 6, lines 22-36).

With respect to claim 21, Hays discloses that said modifying step is performed so as to increase the probability calculated by a modification factor which increases as a function of time (i.e. factor added to slightly increase the target weight that is increased over time) (column 6, lines 22-36).

With respect to claim 22, Hays discloses that said probability factor is given a weight in determining said allocation of articles which is different for different degrees of completion of the batches (i.e. probability factor is given a weight that corresponds to the remaining need of the batches to be completed) (column 3, lines 38-44, column 4, lines 8-15 and column 6, lines 18-36).

With respect to claim 23, Hays discloses initially allocating articles to batches is performed indiscriminately until partly completed batches reach one of a predetermined sum weight and a predetermined number of articles, after which said controlling allocation of an article to a respective batch in dependence upon a comparison of the factor calculated for each incomplete batch is commenced (column 4, lines 52-64 and column 6, lines 5-14).

With respect to claim 24, Hays discloses that said probability factor is given a greater weight in determining said allocation of articles for completion of batches

than prior thereto (i.e. probability factor is given a weight that corresponds to the remaining need of the batches to be completed which is greater than prior batches as needed) (column 3, lines 38-44, column 4, lines 8-15 and column 6, lines 18-36).

With respect to claim 25, Hays discloses the further steps of monitoring batch weights of completed batches, and adjusting allocation of articles to batches in dependence on the monitored batch weights so as to insure that average batch weight is at least a predetermined amount (i.e. final batch weights averaging at least a pound but no more than one-fiftieth of a pound overweight) (column 7, lines 3-18 and column 11, lines 1-8).

With respect to claim 26, Hays discloses that said controlling allocation in accordance with the historical frequency distribution is performed using only a portion of said historical frequency distribution (i.e. allocation in accordance with a historical frequency distribution for a specific weight or narrow range of weights) (column 3, lines 38-44).

With respect to claim 34, Hays disclose that the allocating of articles is effected so that said predetermined weight range is subject to a predetermined target weight distribution (column 7, lines 3-18 and column 11, lines 1-8).

With respect to claim 38, Hays discloses a batching system for accumulating articles having different weights (column 3, lines 7-9) into plural batches (column 3, lines 22-25), wherein each of a plurality of completed batches comprises a plurality of articles and has a sum weight within a predetermined weight range (column 4, lines 41-51), said batching system comprising means for establishing a historical

frequency distribution of article weights (column 3, lines 38-44), a computer to keep track of the articles according to the weight of each article (column 2, line 62 to column 3, line 6 and column 7, lines 27-28) and to calculate a preference for each article (column 3, line 64 to column 4, line 2 and column 5, lines 1-13) by statistical probability calculations based upon said historical frequency distribution to control allocation of the articles to make up the batches in accordance with said historical frequency distribution of article weights (column 3, lines 38-44, column 4, lines 8-15 and column 6, lines 18-36), and means for allocating the articles to make up the batches in accordance with the calculated preference (column 5, lines 1-13).

With respect to claim 36, Hays discloses that said assessing of article weights is performed using a weighing device (column 11, lines 19-21).

With respect to claim 37, Hays discloses that said article weights are assessed at a weigh station located upstream of all of the batching stations (column 11, lines 11-26) and allocation effecting is based on probability factor comparisons performed prior to departure of the articles from the weighing station (column 3, line 45 to column 4, line 2 and column 6, lines 16-36).

With respect to claim 40, Hays further discloses a method of accumulating articles having different weights (column 3, lines 7-9) into plural portions (column 3, lines 22-25), wherein each completed portion comprises a plurality of articles and has a target weight within a predetermined weight range (column 4, lines 41-51), said method comprising the steps of individually weighing each article in a stream of articles (column 4, lines 52-57), keeping track of the weights of a plurality of weighed

articles (column 2, line 62 to column 3, line 6 and column 7, lines 27-28) and using said weights for determining a factual weight distribution of the articles in said stream of articles (column 3, lines 38-44), based upon said factual weight distribution, statistically calculating the probabilities of each new article being successfully added to the bin so as to produce a portion of weight within a predetermined weight range together with subsequent articles (column 3, lines 38-44, column 4, lines 8-15 and column 6, lines 18-36), and based upon the calculated probabilities, performing a suitability analysis for determining which delivery of each new article is best suited for producing such a portion (column 3, line 64 to column 4, line 2 and column 5, lines 1-13), and diverting each new article from said stream of articles into a portioning bin based upon said suitability analysis (column 5, lines 1-13).

With respect to claim 41, Hays also discloses a system for accumulating articles having different weights (column 3, lines 7-9) into plural portions (column 3, lines 22-25), wherein each completed portion comprises a plurality of articles and has a target weight within a predetermined weight range (column 4, lines 41-51), said system comprising a weigher for individually weighing each article in a stream of articles (column 4, lines 52-57), a computer control unit having means for keeping track of the weights of a plurality of weighed articles (column 2, line 62 to column 3, line 6 and column 7, lines 27-28) and for using said weights for determining a factual weight distribution of the articles in said stream of articles (column 3, lines 38-44), based upon said factual weight distribution, for statistically calculating the

probabilities of each new article being successfully added to the bin so as to produce a portion of weight within a predetermined weight range together with subsequent articles (column 3, lines 38-44, column 4, lines 8-15 and column 6, lines 18-36), and based upon the calculated probabilities, for performing a suitability analysis for determining which delivery of each new article is best suited for producing such a portion (column 3, line 64 to column 4, line 2 and column 5, lines 1-13), and article diverting means coupled to said control unit for diverting each new article from said stream into a portioning bin based upon said suitability analysis (column 5, lines 1-13).

As noted above, the invention of Hays teaches many of the features of the claimed invention and while the invention of Hays does teach means for serially supplying articles to a weighing station at which the weights of the articles are assessed (Hays; column 4, lines 52-57) and a computer operable to control operation of a selector for controlling said allocation of articles (Hays; column 11, lines 22-26) in dependence on the probability factor (Hays; column 3, lines 38-44, column 4, lines 8-15 and column 6, lines 18-36), Hays does not explicitly include contemporaneous batching of the articles into a plurality of batches.

Dalgaard teaches a method of accumulating articles having different weights into plural portions within a plurality of portioning bins (page 2, lines 11-18) wherein each complete batch comprises a plurality of articles and has a sum weight within a predetermined weight range (page 2, lines 55-58), said method comprising the steps of establishing a historical frequency distribution of article weights (page 1, lines 61-

79) and using a computer to keep track of the articles according to the weight of each article (page 1, lines 36-37) to control allocation of the articles to make up the batches in accordance with said historical frequency distribution of article weights (page 1, lines 109-119).

Dalgaard teaches that allocation of articles to batches is performed contemporaneously in accordance with at least two different sets of batching criteria so as to produce batches having different predetermined weight ranges (i.e. at the same time, batched according to weight and batched by station that received an article the latest) (page 1, lines 89-102) wherein the different sets of batching criteria are prioritized differentially (i.e. weight prioritized by closest to the average weight and station prioritized by time/latest station to receive an article) (page 1, lines 89-102).

Dalgaard also teaches means for serially supplying articles to a weighing station at which the weights of the articles are assessed (page 1, line 35), means for serially moving the articles from the weighing station (page 1, lines 38-43) into a distribution system have a plurality of batching stations and a selector that is operable to move each article into a selected batching station (page 2, lines 11-25), wherein said computer is operable to control operation of the selector for controlling said allocation of articles (page 2, lines 8-10 and 20-21 and Figure 1).

It would have been obvious to one having ordinary skill in the art to modify the invention of Hays to explicitly include contemporaneous batching of the articles into a plurality of batches, as taught by Dalgaard, because the invention of Hays is

concerned with increasing the speed of batching (Hays; column 7, lines 56-65) and, as suggested by Dalgaard, the combination would have improved the method of Hays by allowing the creation of simultaneous batches thereby increasing the speed and efficiency of the batching of Hays (page 1, lines 57-60 and 98-102).

7. Claims 29 and 33, as may best be understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Hays in view of Dalgaard and further in view of U.S. Patent No. 4,951,825 to Hawkins et al.

As noted above, the invention of Hays and Dalgaard teaches many of the features of the claimed invention and while the invention of Hays and Dalgaard does teach means for forming batches of items such as fruits and vegetables (Hays; column 1, lines 11-15) with the sorting into batches using an allocation means (Hays; column 5, lines 1-13) so that the plural articles in each batch have an approximately uniform size or weight (Hays; column 3, lines 30-33and column 7, lines 3-7), the combination does not explicitly include means for allocating different kinds of articles into batches contemporaneously with each batch comprising only one kind of article.

Hawkins teaches an apparatus for classifying particulate material, specifically, food by color, shape or any other attribute (column 9, lines 6-12) comprising allocating different kinds of the particulate material into batches contemporaneously with each batch comprising only one kind of article (column 2, lines 50-68 and column 5, lines 14-30).

It would have been obvious to one having ordinary skill in the art to modify the invention of Hays and Dalgaard to explicitly include means for allocating different kinds of articles into batches contemporaneously with each batch comprising only one kind of article, as taught by Hawkins, because the invention of Hays and Dalgaard is drawn to batching bulk harvest foods (Hays; column 3, lines 7-25) and Hawkins suggests that the combination would have improved the applicability and efficiency of Hays and Dalgaard by providing means for sorting different types of foods thereby providing an automated fruit/vegetable classifying system eliminating the need of the operator of Hays and Dalgaard to manually separate the different types of foods harvested (column 1, lines 13-26 and column 9, lines 6-12).

8. Claims 30-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hays in view of Dalgaard and further in view of U.S. Patent No. 4,661,917 to Haze et al.

As noted above, the invention of Hays and Dalgaard teaches many of the features of the claimed invention and while the invention of Hays and Dalgaard does teach sorting a plurality of articles into batches using an allocation means (Hays; column 5, lines 1-13) so that the plural articles in each batch have an approximately uniform size or weight (Hays; column 3, lines 30-33and column 7, lines 3-7), the combination does not specify sorting different kinds of articles contemporaneously and sequentially.

Haze teaches a mixing combinatorial counting and weighting method and apparatus therefore wherein different kinds of articles are allocated into batches (column 1, lines 14-22) in order to maintain a weight of the batches within a predetermined range (column 1, lines 40-47) wherein the different kinds of articles are allocated into batches sequentially (i.e. one article at a time from each supply unit) (column 3, lines 12-18) as well as contemporaneously (i.e. a plurality of kinds of articles supplied to the overall mixture at a time) (column 3, lines 12-18) with at least two types of articles being allocated to each batch (column 1, lines 14-22) and wherein the different types of articles are allocated to the different batches with different delivery sequences (i.e. each article is allocated with a different supply unit) (column 3, lines 12-18 and Figure 1).

It would have been obvious to one having ordinary skill in the art to modify the invention of Hays and Dalgaard to specify sorting different kinds of articles contemporaneously and sequentially, as taught by Haze, because Haze suggests that there is a strong demand for automation of the mixing and weighing operation when dealing with goods of which there is a larger variety, to raise efficiency and accuracy while reducing costs, (column 1, lines 23-37) and therefore the combination would have aided the art by providing the sorting method of Hays and Dalgaard in a product environment using the particular sorting to carry out such mixing as well as improved the art of vegetable and fruit batching by incorporating the ability to provide mixed items.

Response to Arguments

9. Applicant's arguments with respect to claims 11-16 and 18-41 have been considered but are moot in view of the new ground(s) of rejection.

The following arguments, however, are noted:

> In particular, Hays discloses a weight portioning method and apparatus that bears no resemblance to that of the present invention. In fact, Hays discloses a method and apparatus that is the complete opposite from the present invention. That is, while the present invention, after weighing, supplies the articles into a distribution system having a plurality of batching stations and uses a selector for moving each of the articles into a selected one of the plurality of batching stations, Hays feeds articles into a plurality of weighing stations 24, 48, 70 from which selected articles are moved to a single final batch forming station 30, 54, 76 to which, optionally additional articles fed by a separate feeder system 42, 62 and separately weight at 54, 64 are also delivered. It is not seen how forming a single batch from multiple weighing stations can render obvious, let alone anticipate the present invention which forms a plurality of batches from a single stream of previously weighed articles. As a result, the rejection under § 102 based upon the Hays patent should be withdrawn and such action is hereby requested.

The Examiner asserts that this argument is considered to be moot in view of the newly amended claims and corresponding new grounds of rejection.

The Examiner asserts with respect to the argument that the present invention "forms a plurality batches from a single stream of previously weighted articles", the Examiner asserts that Hays is not "the complete opposite from the present invention" in light of Hays' teaching that "[t]his invention deals with the portioning by weight into groups of a plurality of articles of varying and variable individual weights" and "[a]ccording to a basic step in all the inventive methods, a plurality of articles is assembled, weighted, their individual weights remembered, and the articles kept ready for selection."

Applicant argues:

Claims 27, 28, 35-37 and 39-41 have been rejected, as best understood, as being unpatentable under 35 USC § 103 based upon the Hays patent when viewed in combination with the Dalgaad UK patent application publication. This rejection not only suffers from the difficiencies of the Hays patent relative to the present invention noted above, but Dalgaad is so fundamentally different in structure and concept from the method and apparatus of the Hays patent that no one, no matter how skilled in the art, would ever consider to combine their teachings.

The Dalgaard patent application publication, as noted in applicant's previous response, teaches a modified accumulation method in which articles outside of an acceptable variation from an average weight are used as the first article in each bin and then the remainder of the bin is filled based upon the number of articles of average weight needed to reach the target weight, instead of using the probability method of the present application which selects which batch to send each article to based on the probability of that article best contributing to achieving the target weight without performing any probability calculations.

The Examiner has made no attempt to explain how one could possibly apply Dalgaard's concepts relating to a single of stream of weighed products which are sorted into multiple batches to the Hays who delivers unweighed products to a plurality of weighing stations. Furthermore, there is no explanation of how Hays' statistical concepts, which do not apply to sending a single stream of weighed products to multiple batching stations at which no weighing is to take place, could be adapted to the fundamentally different method and apparatus disclosed by Dalgaard. Furthermore, it is not seen how any combination of these two references, neither of which is comparable to the present invention, could render the present invention obvious. For example, it is not seen how Hays' statistical concepts could be employed with also using his multiple scale implementation so any multiple batching implementation based on Dalgaard would have to retain this feature, and as such, would be distinguishable from the present invention. Therefore, withdrawal of the § 103 rejection based on the combination of the Hays and Dalgaard references is in order and is hereby requested.

The Examiner asserts that the invention of Hays discloses a single stream of articles that flow into a plurality of scales (column 11, lines 11-19) wherein a control system then analyzes and selects combinations of the articles in the plurality of scales to achieve a final target weight of a batch (column 11, lines 19-26) of a

plurality of batches (column 3, lines 12-25). Hays further discloses that the selection of articles to achieve the final weight, within a predetermined weight range (column 4, lines 41-51), is based on establishing a historical frequency distribution of article weights (column 3, lines 38-44), and using a computer to keep track of the articles according to the weight of each article (column 2, line 62 to column 3, line 6) and to calculate a preference for use of each article in producing said completed batches (column 3, line 64 to column 4, line 2 and column 5, lines 1-13) by statistical probability calculations based upon said historical frequency distribution (column 3, lines 38-44, column 4, lines 8-15 and column 6, lines 18-36) and controlling allocation of the articles to make up the batches in accordance with the calculated preference (column 5, lines 1-13).

While Hays does disclose forming a plurality of batches, Hays does not explicitly include contemporaneous batching of the articles into a plurality of batches.

Dalgaard then teaches a method of accumulating articles having different weights into plural portions within a plurality of portioning bins (page 2, lines 11-18) wherein each complete batch comprises a plurality of articles and has a sum weight within a predetermined weight range (page 2, lines 55-58), said method comprising the steps of establishing a historical frequency distribution of article weights (page 1, lines 61-79) and using a computer to keep track of the articles according to the weight of each article (page 1, lines 36-37) to control allocation of the articles to make up the batches in accordance with said historical frequency distribution of article weights (page 1, lines 109-119).

Dalgaard also teaches that allocation of articles to batches is performed contemporaneously in accordance with at least two different sets of batching criteria so as to produce batches having different predetermined weight ranges (i.e. at the same time, batched according to weight and batched by station that received an article the latest) (page 1, lines 89-102) wherein the different sets of batching criteria are prioritized differentially (i.e. weight prioritized by closest to the average weight and station prioritized by time/latest station to receive an article) (page 1, lines 89-102).

Dalgaard further teaches means for serially supplying articles to a weighing station at which the weights of the articles are assessed (page 1, line 35), means for serially moving the articles from the weighing station (page 1, lines 38-43) into a distribution system have a plurality of batching stations and a selector that is operable to move each article into a selected batching station (page 2, lines 11-25), wherein said computer is operable to control operation of the selector for controlling said allocation of articles (page 2, lines 8-10 and 20-21 and Figure 1).

The Examiner therefore asserts that one having ordinary skill in the art would clearly recognize the ability to modify the invention of Hays to, rather than only selecting articles to form one batch at a time, employ the control aspect of Dalgaard to contemporaneously and/or serially supply articles into a distribution system having a plurality of batching stations and a selector that is operable to move each article into a selected batching station.

Since the combination would not modify the criteria for selecting which articles are suitable for allocation to a particular batch to meet a desired weight range, there is no reason for one having ordinary skill in the art to consider Hays' statistical concepts inapplicable to a plurality of batching stations.

The Examiner further asserts that it would have been obvious to one having ordinary skill in the art to modify the invention of Hays to explicitly include contemporaneous batching of the articles into a plurality of batches, as taught by Dalgaard, because the invention of Hays is concerned with increasing the speed of batching (Hays; column 7, lines 56-65) and, as suggested by Dalgaard, the combination would have improved the method of Hays by allowing the creation of simultaneous batches thereby increasing the speed and efficiency of the batching of Hays (page 1, lines 57-60 and 98-102).

Applicant argues:

> Claim 29 has been rejected, as best understood, as being unpatentable under 35 USC § 103 based upon the Hays patent when viewed in combination with the Hawkins et al. patent. However, Hawkins et al. merely discloses a classifying apparatus for particulate material with no batching being involved. Besides the fact that there is no suggestion that the classifying as taught by Hawkins et al. for particulate material using air blasts would be suitable for use in classifying the fruits and vegetables batched by Hays, even if the food items batched by Hays were to be sorted by type, such would not eliminate the basic differences between the present invention and the disclosure of the Hays patent which are noted above as making it incapable of teaching the present invention nor would it how the sorted items could be contemporaneously batched using Hays' statistical concepts and apparatus that is not designed to separately batch two different types of products out of a stream of products. Thus, this rejection should also be withdrawn and action to that effect is now requested.

The Examiner asserts that the invention of Hawkins is only included to explicitly include means for allocating different kinds of articles into batches contemporaneously with each batch comprising only one kind of article. One having ordinary skill in the art would not find it problematic to use the statistical concepts of Hays in view of the teachings of Hawkins as the proposed combination would not modify the implementation of using a computer to keep track of the articles according to the weight of each article and to calculate a preference for use of each article in producing said completed batches by statistical probability calculations based upon said historical frequency distribution.

The Examiner further asserts that it would have been obvious to one having ordinary skill in the art to modify the invention of Hays to explicitly include means for allocating different kinds of articles into batches contemporaneously with each batch comprising only one kind of article, as taught by Hawkins, because the invention of Hays is drawn to batching bulk harvest foods (Hays; column 3, lines 7-25) and Hawkins suggests that the combination would have improved the applicability and efficiency of Hays by providing means for sorting different types of foods thereby providing an automated fruit/vegetable classifying system eliminating the need of the operator of Hays to manually separate the different types of foods harvested (column 1, lines 13-26 and column 9, lines 6-12).

Applicant argues:

Claims 30-33 have been rejected, as best understood, as being unpatentable under 35 USC § 103 based upon the Hays patent when viewed in combination

> with the Haze et al. patent. Here again, it is not seen how the method and apparatus using "combinational counting and weighing method" of the Haze et al. patent could be combined with one using the fundamentally different statistical concepts of Hays, let alone so as to result in the present invention. The mere fact that some techniques exist which enable different types of articles to be contemporaneously allocated into batches having at least two types of articles in each batch, does not mean that such can be done using the concepts that are central to the Hays patent, or that any modification which would enable Hays to form such batches would be suggestive of the present invention given the fundamentally different nature of present invention relative to the method and apparatus of Hays which relies of use of multiple weighing stations to form an individual batch instead of forming multiple batches from a stream of previously weighed products. Thus, the Examiner has not met his burden of establishing a prima facie case of obviousness so that withdrawal of this rejection is in order and is now requested.

The Examiner again asserts that Applicant has not sufficiently provided reasons to one having ordinary skill in the art why the statistical concepts of Hays are inapplicable to contemporaneous or sequential sorting. The Examiner maintains that Hays' teaching of using a computer to keep track of the articles according to the weight of each article and to calculate a preference for use of each article in producing said completed batches by statistical probability calculations based upon said historical frequency distribution can still readily be applied to contemporaneously and/or sequential sorting as such sorting can still be based on historical data and probabilities of producing a desired batch.

The Examiner also maintains that it would have been obvious to one having ordinary skill in the art to modify the invention of Hays to specify sorting different kinds of articles contemporaneously and sequentially, as taught by Haze, because Haze suggests that there is a strong demand for automation of the mixing and weighing operation when dealing with goods of which there is a larger variety, to

raise efficiency and accuracy while reducing costs, (column 1, lines 23-37) and therefore the combination would have aided the art by providing the sorting method of Hays in a product environment using the particular sorting to carry out such mixing as well as improved the art of vegetable and fruit batching by incorporating the ability to provide mixed items.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to Applicant's disclosure:

U.S. Patent No. 4,428,179 to Jordan et al. teaches a chicken weighing apparatus.

U.S. Patent No. 4,482,061 to Leverett teaches an apparatus and process for sorting articles.

U.S. Patent No. 4,397,364 to Hirano teaches a combination weighting machine.

U.S. Patent No. 4,157,738 to Nishiguchi et al. teaches a method for counting the number of articles using a weighing machine.

U.S. Patent No. 4,733,363 to Yamada et al. teaches a control system for combinatorial weighing or counting apparatus.

11. Applicant's amendment necessitated the new ground(s) of rejection presented in

this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey R. West whose telephone number is (571)272-2226. The examiner can normally be reached on Monday through Friday, 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eliseo Ramos-Feliciano can be reached on (571)272-7925. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Jeffrey R. West
Primary Examiner
Art Unit - 2857

June 10, 2007